

Allied Landfill Superfund Site

*Next Steps
in Cleanup*

Washington Writers' Academy
Kalamazoo, Michigan

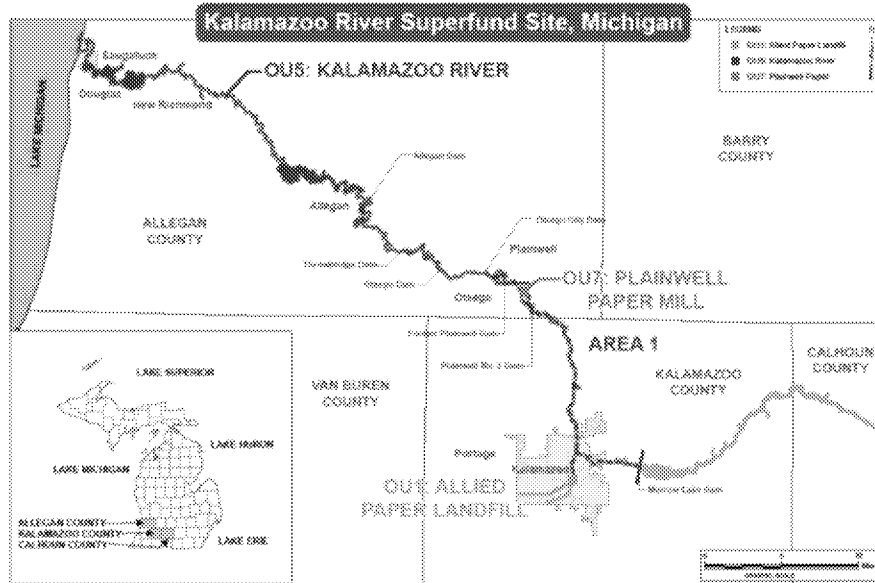
April 30, 2015

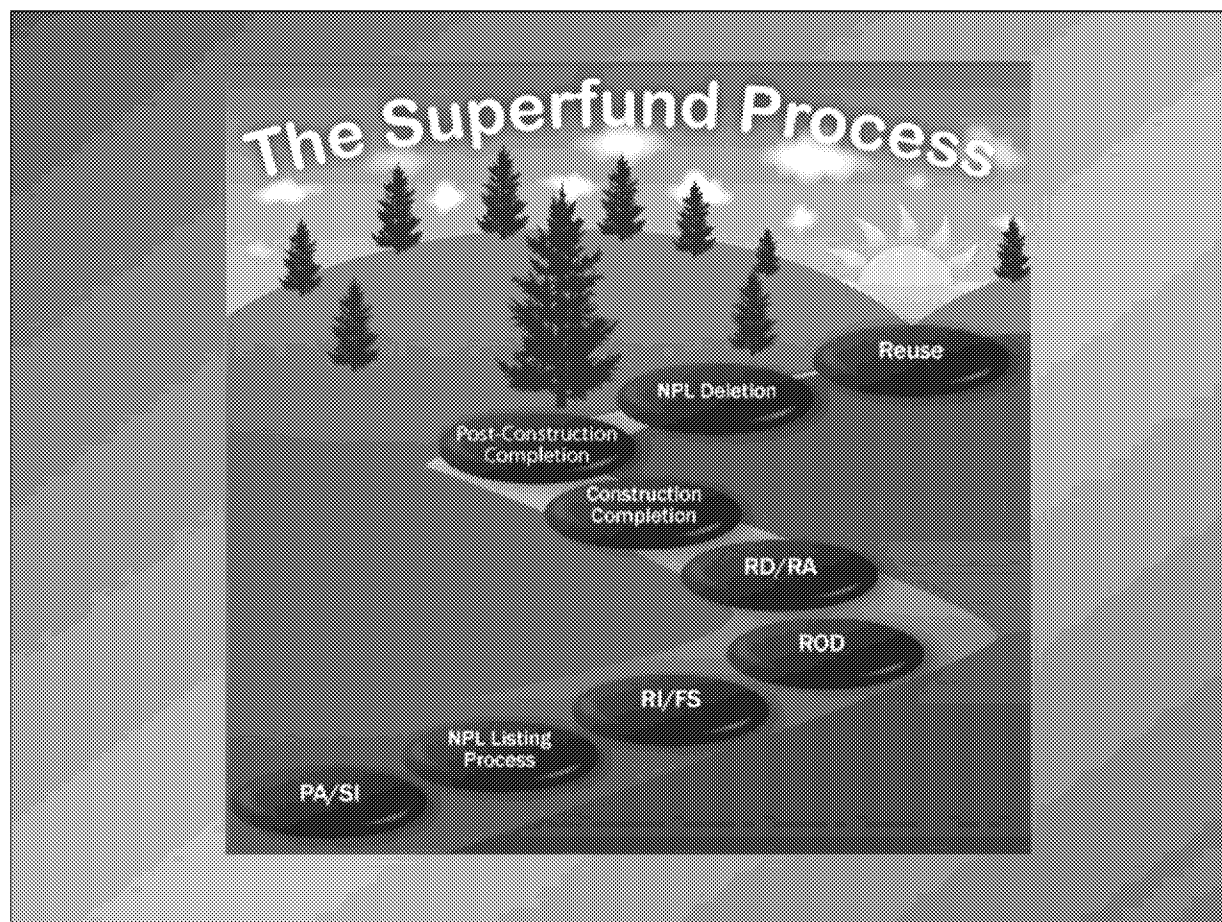
Agenda

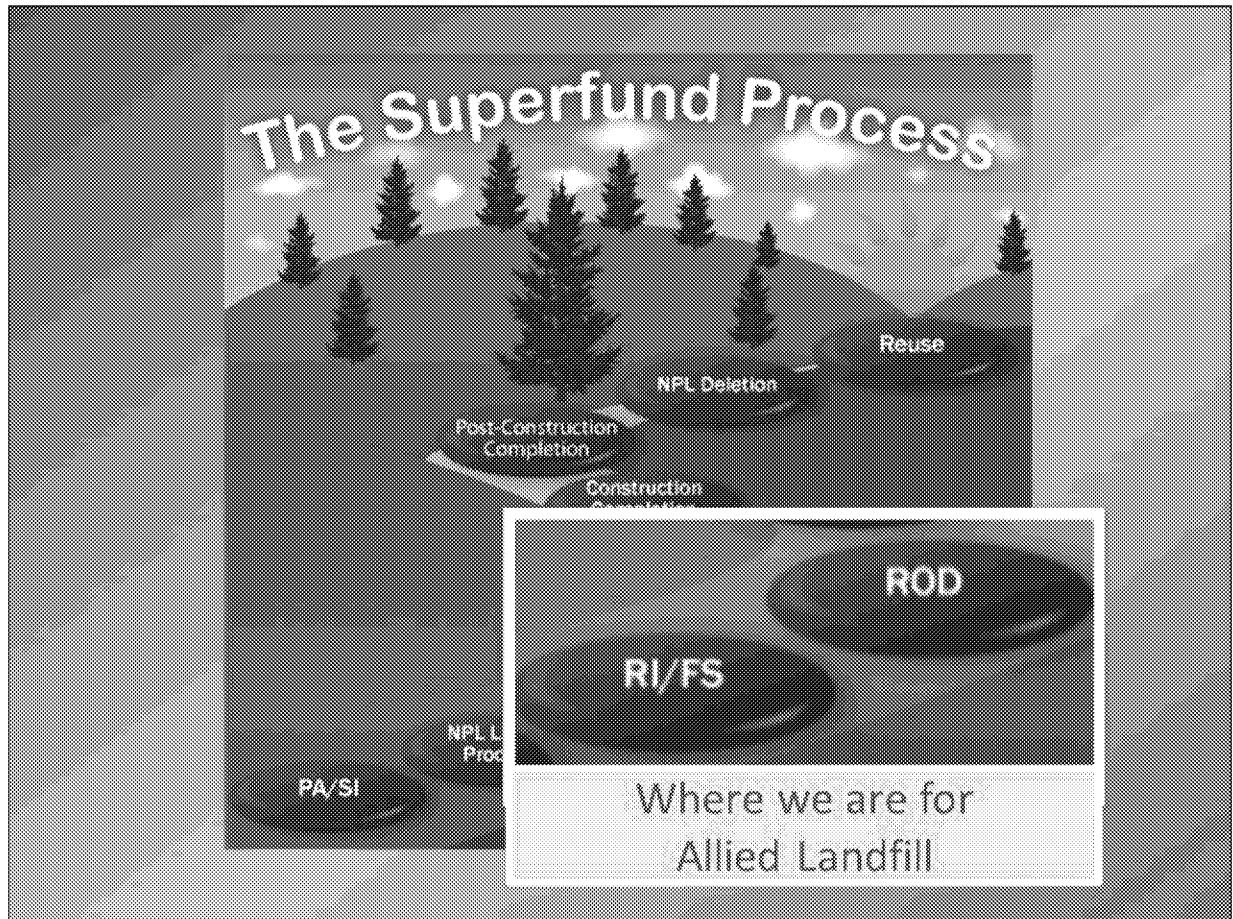


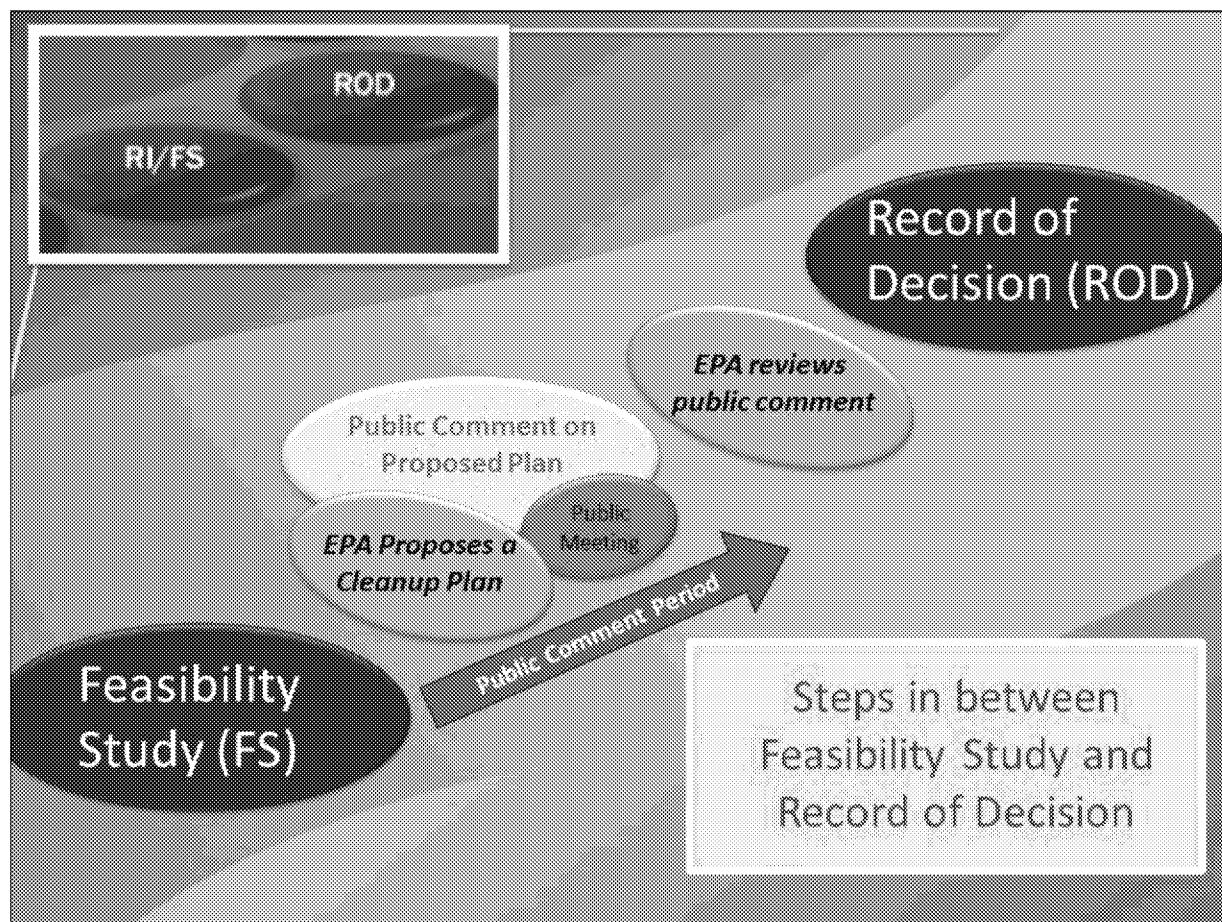
- Community Involvement & Where We Are Now *This is what the handout of the Agenda says (as long as they match)*
- Guiding Principles & Technical Considerations
- Next Steps
- Q&A

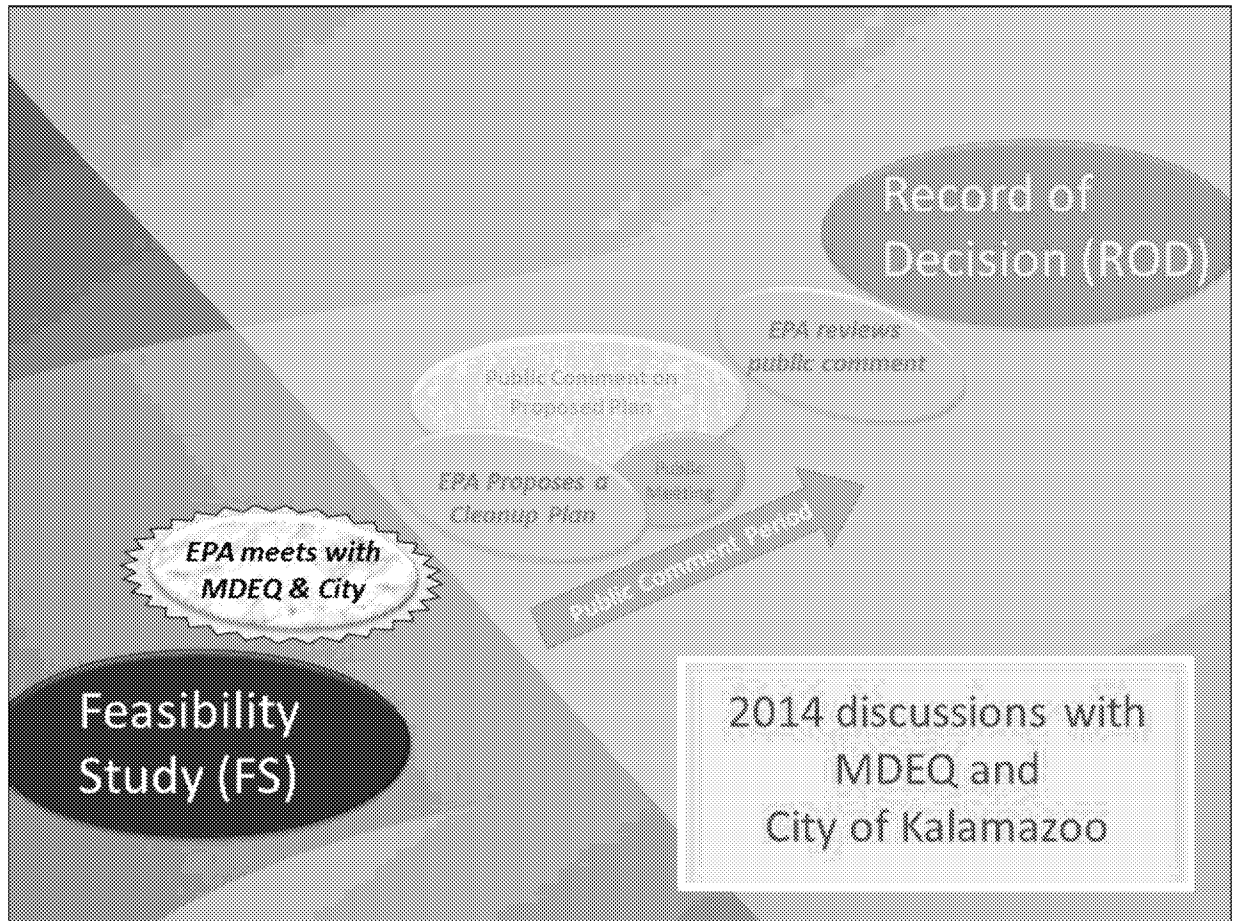
Community Involvement

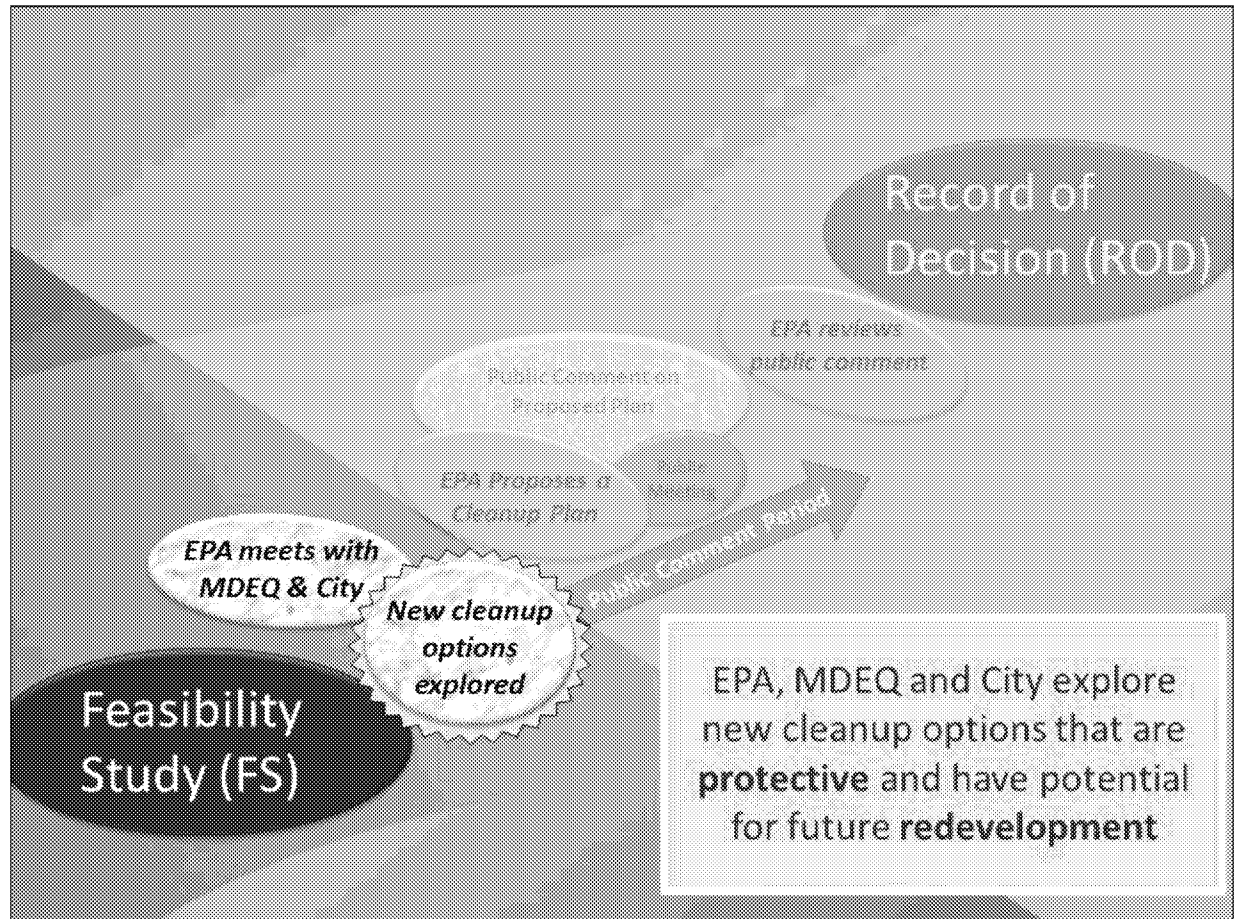


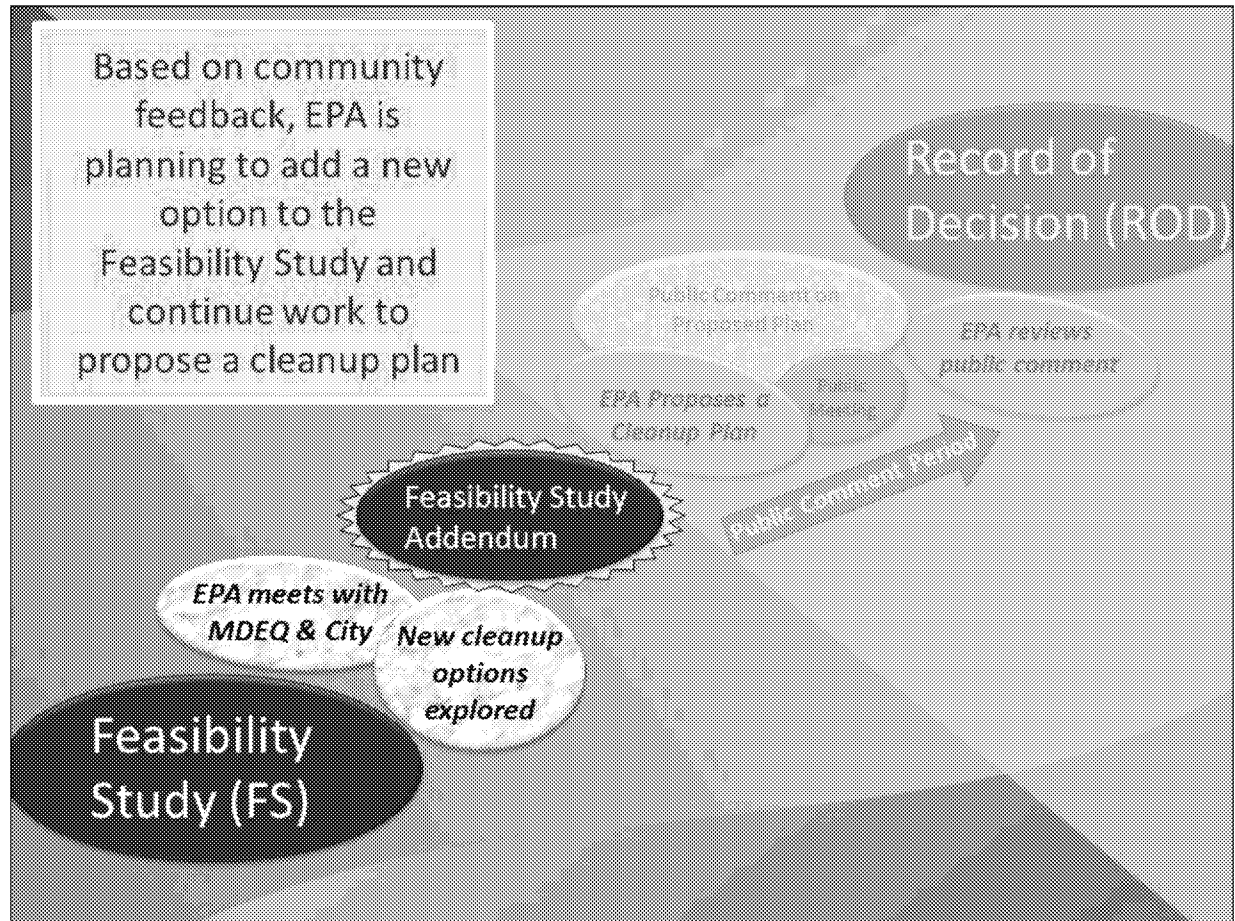


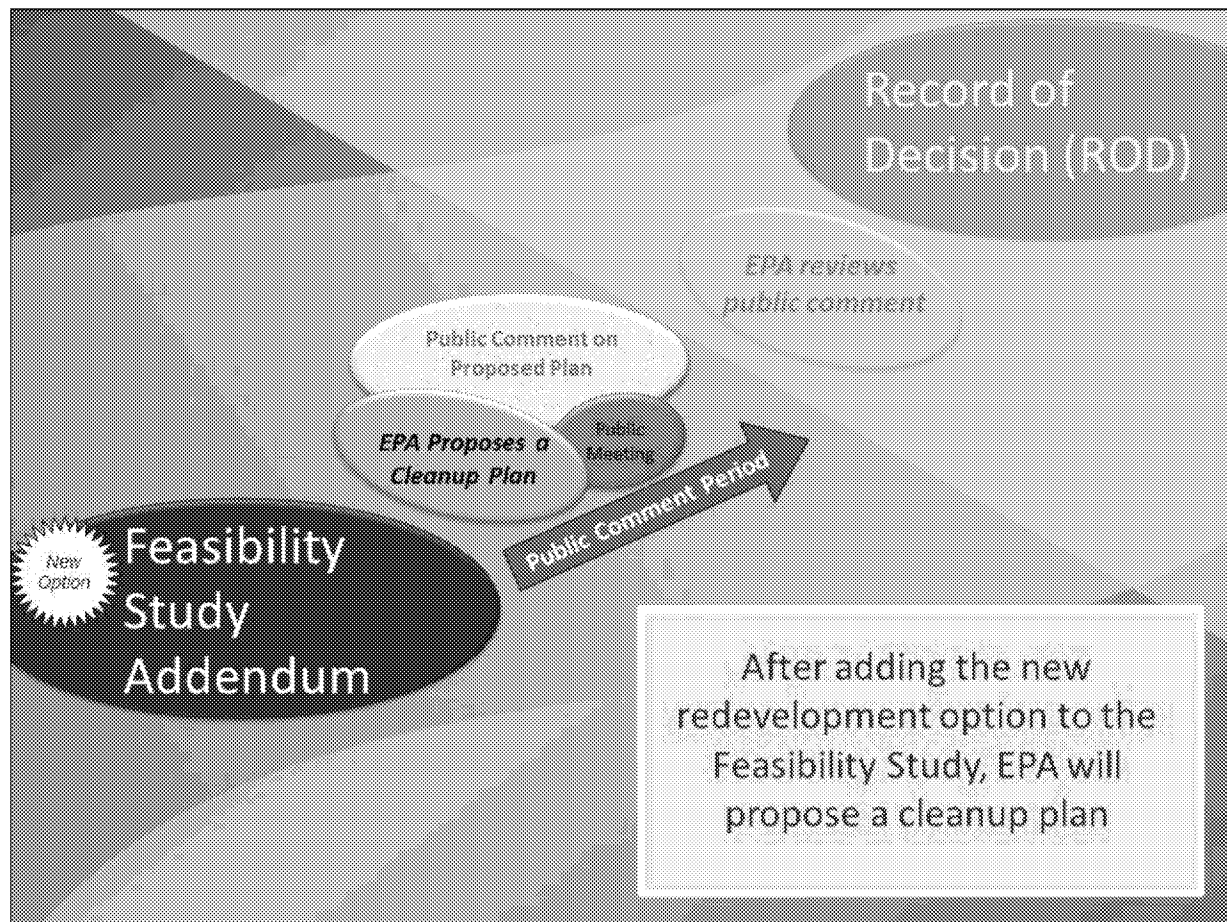












Path to Collaboration



*I may have covered this
in the previous slides*

- Feasibility Study - November 2013
- Request from Mayor Hopewell – December 2013
- Start of Collaboration – February 2014

2014 Groundwater Study



- Conceptual Site Model
- 2014 Sampling Event
 - XX Wells
 - Additional Deep wells
- Conclusions

Guiding Principles



- Protectiveness
- Productivity
- Accessibility
- Connectedness



Next Steps



- Public Feedback
- Publish Groundwater Report
- Add New Alternative to Feasibility Study
 - Availability Session
- EPA Issue Proposed Plan
- EPA Selects Remedy (Record of Decision)



- Frequently Asked Questions
- Questions and Answers



Flow goes to Portage Creek

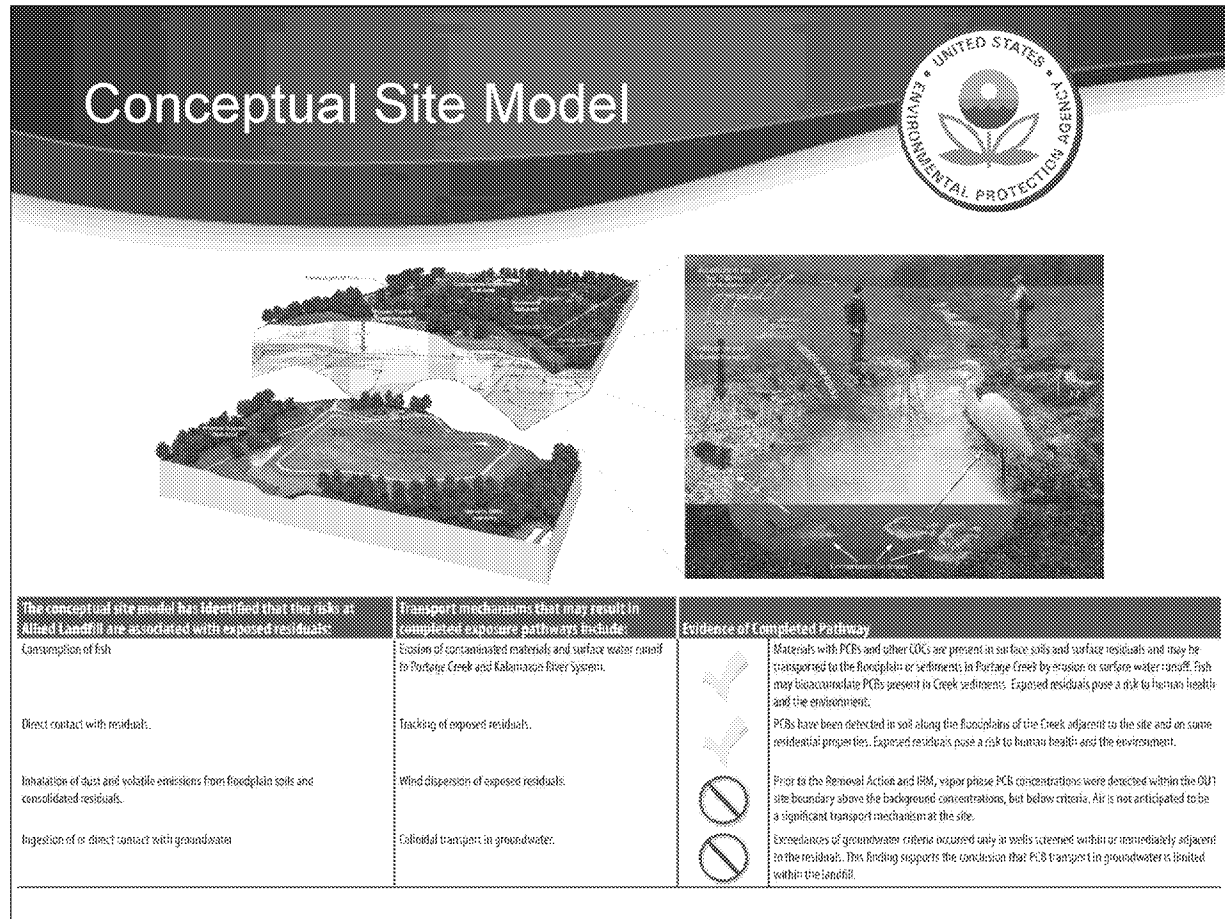
Distribution of PCBs in soil

PCBs frozen in waste.

Immobile.

If PCBs were mobile within the waste, we would see gradients

Further evidence that PCBs are not migrating to groundwater



The site risks are:

Migration of PCBs via erosion to Portage which could lead to fish uptake and then to anglers

Direct contact to and ingestion of exposed residuals

The cleanup alternatives need to prevent direct contact, prevent erosion

Remedial Action Objectives



RAOs are goals for protecting human health and the environment.

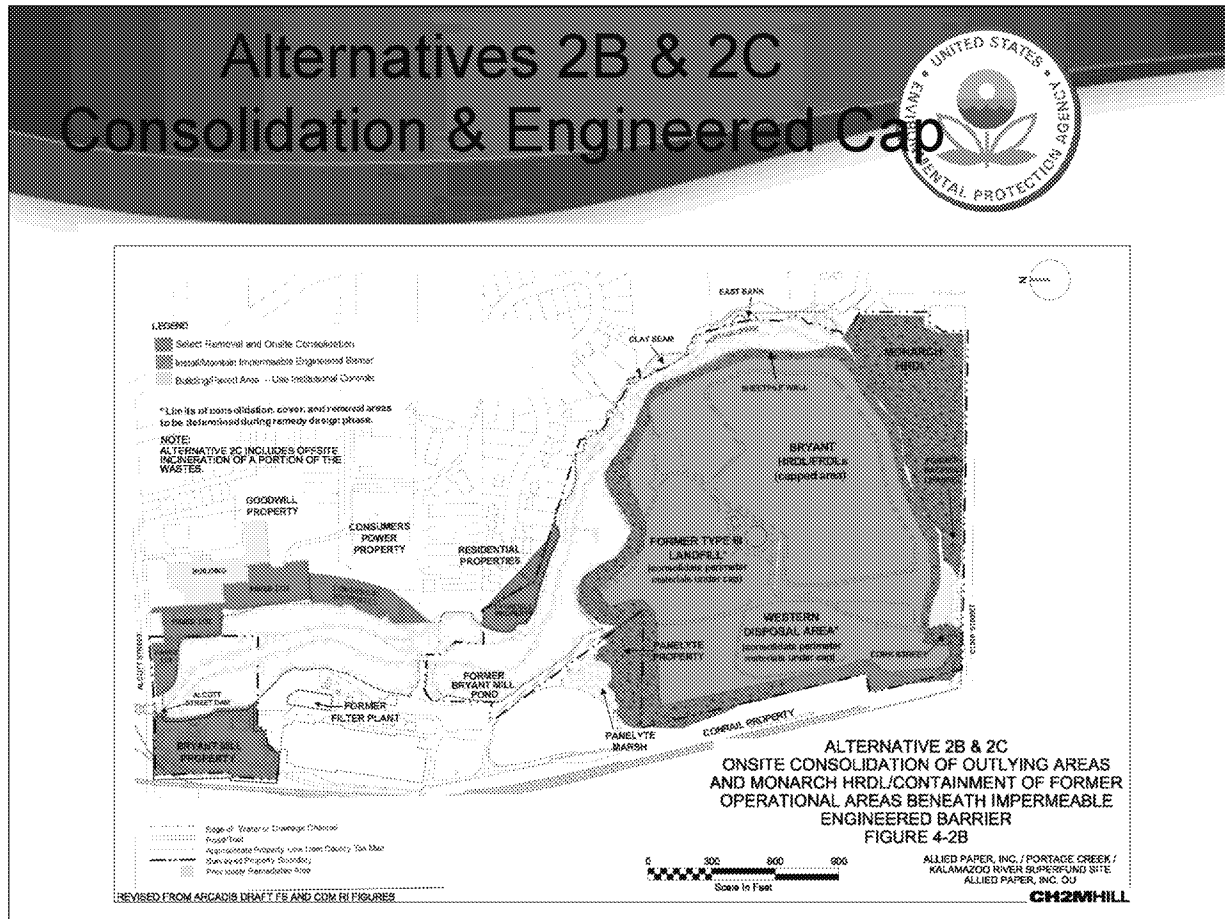
- **RAO 1** – Mitigate the potential for human and ecological exposure to materials at OU1 containing COC concentrations that exceed applicable risk-based cleanup criteria.
- **RAO 2** – Mitigate the potential for COC-containing materials to migrate, by erosion or surface water runoff, into Portage Creek or onto adjacent properties.
- **RAO 3** – Prevent contaminated waste material at the

Groundwater no

Surface water via erosion yes.

Prevent direct contact

Prevent erosion and migration



Consolidation, capping, monitoring – Monarch excavated
Monarch wetland

Cost - \$41M

42 capped acres, 12 wetland

2 years

NCP Threshold Criteria



In evaluating the cleanup alternatives at all Superfund sites, EPA uses a specific set of nine criteria (called the NCP Criteria) that ask the following questions about each alternative:

Threshold Criteria – must be met for an alternative to be eligible.

1. **Overall protection of human health and the environment.** Is it protective? How are risks eliminated, reduced, or controlled?
2. **Compliance with ARARs.** Does it meet environmental laws or provide grounds for a waiver?

All of our alternatives in the FS meet these requirements.

They are all protective

They all legal

NCP Balancing Criteria



Balancing Criteria – determines relative strengths and weaknesses among the criteria that meet threshold.

3. **Long-term effectiveness and permanence.** Does it provide reliable protection over time?
4. **Reduction of toxicity, mobility, or volume through treatment.** Does it use a treatment technology? This is preferred, if possible.
5. **Short-term effectiveness.** Will the remedy be implemented fast enough to address short-term risks, and will there be adverse effects (human health or environmental) during construction/implementation?
6. **Implementability.** How difficult will it be to implement (e.g. availability of materials or coordination of Federal, State, and local agencies)?
7. **Cost effectiveness.** What are the estimated capital and operation and maintenance costs in comparison to other, equally-protective alternatives?

We looked at treatment.

PCBs already immobilized in the waste,

off-site incineration – added cost without added protectiveness

Cost – EPA's position set out in the Federal Register is that potential tax earnings or property value cannot not be considered as a part of the cost evaluation criteria

That said, EPA believes that there should be productive reuse of superfund sites whenever possible. EPA seeks to facilitate it. We have made some efforts here, seen in those redevelopment posters. EPA is committed to facilitating additional reuse planning.

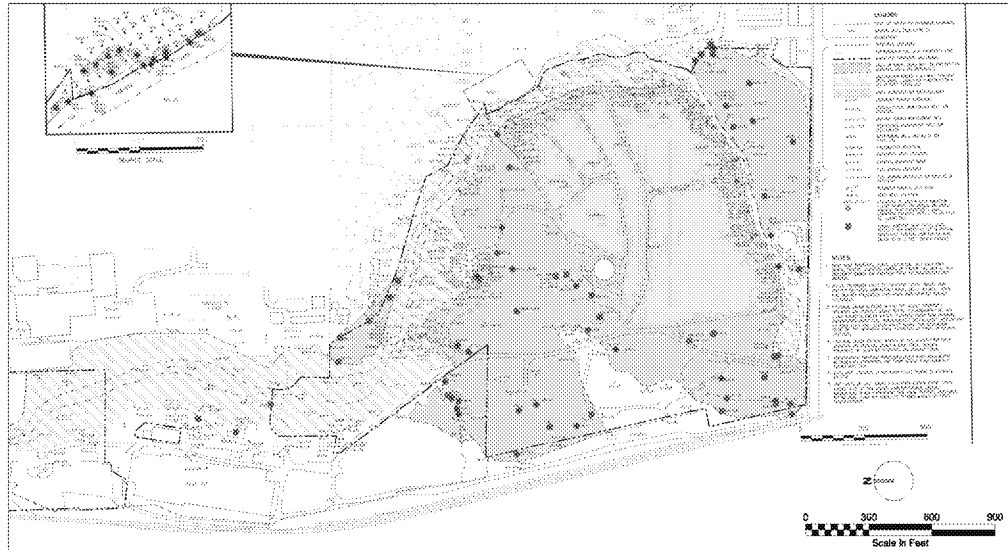
NCP Modifying Criteria



Modifying Criteria – implemented once all public comments are evaluated. They may prompt modifications to the preferred alternative to achieve the end result of a preferred alternative for cleanup in which EPA and the community can be confident.

8. **State acceptance.** Does the State agree with, oppose, or have no comment on it?
9. **Community acceptance.** Does the community support, have reservations about, or oppose it?

Extent of PCBs in Surface Soils



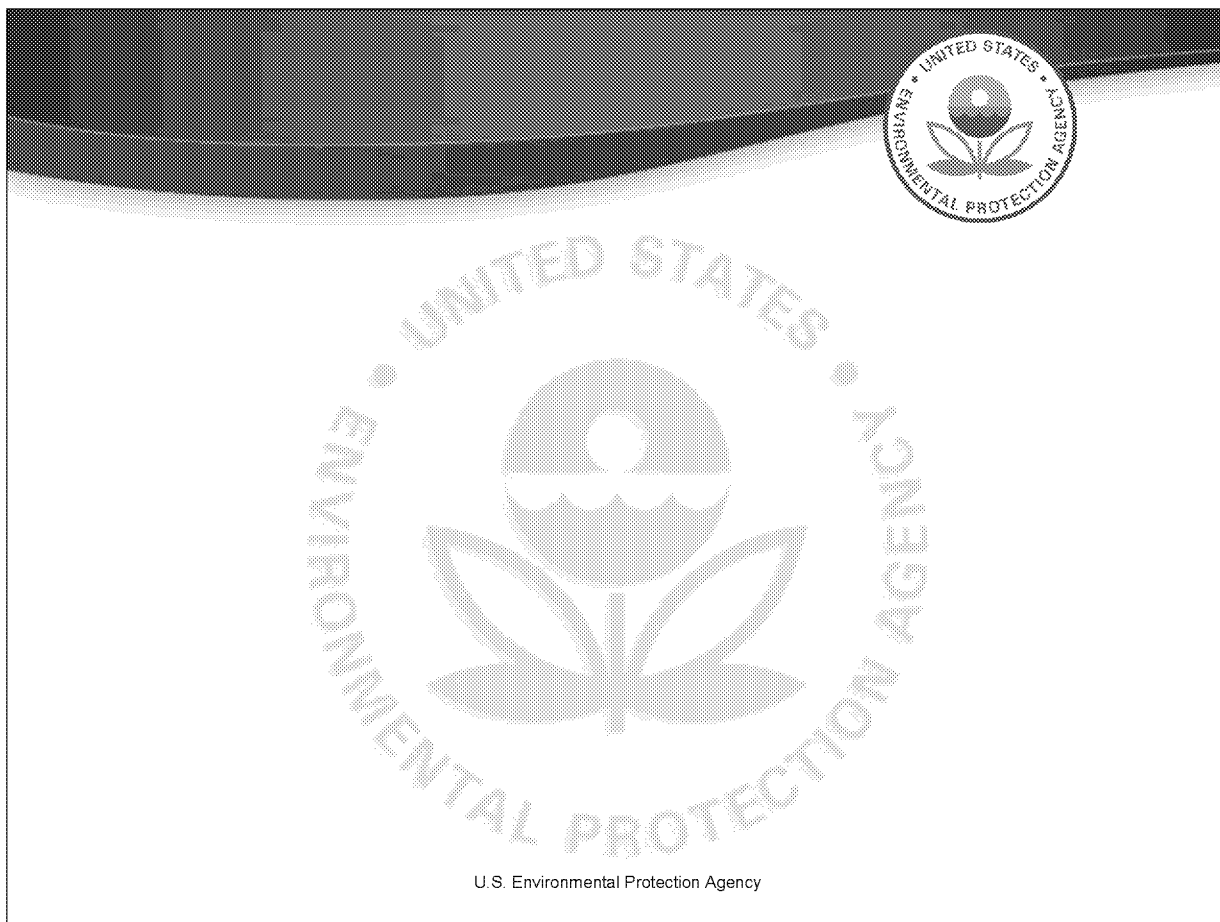
SURFICIAL EXTENT OF PCB
FIGURE 1-4

ALLIED PAPER, INC. / PORTAGE CREEK /
KALAMAZOO RIVER SUPERFUND SITE
ALLIED PAPER, INC. OU

CH2MHILL

REVISED FROM ARCADIS DRAFT FS AND CDM RI FIGURES

Further evidence that PCBs are not migrating to groundwater



U.S. Environmental Protection Agency



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